

AMENDMENTS TO THE CLAIMS

1-21. (Cancelled)

22. (Previously Presented) A method to calibrate imager device responses, comprising:

- presenting a plurality of light radiating sources;
- producing a first set of responses from a spectrophotometer based on the plurality of light radiating sources;
- producing a second set of responses from an imager by exposing the imager device to the plurality of light radiating sources; and
- determining calibrating coefficients from the first set of responses and the second set of responses.

23. (Previously Presented) The method of claim 22, wherein presenting a plurality of light radiating sources includes presenting three to more than five light emitting diodes, wherein each light emitting diode includes a different spectral radiation characteristic within the spectral sensitivity of the human visual system.

24. (Previously Presented) The method of claim 23, wherein presenting three to more than five light emitting diodes includes presenting five light emitting diodes having the peak wavelengths of 430nm, 470nm, 545nm, 590nm, and 660nm, respectively.

25. (Previously Presented) The method of claim 22 wherein producing the first set of responses includes mapping the first set of responses as red, green, and blue values into a plurality of XYZ tristimulus values.

26. (Previously Presented) The method of claim 22 wherein producing the first set of responses based on the plurality of light radiating sources includes exposing a spectrophotometer to the plurality of light radiating sources.

27. (Previously Presented) The method of claim 22 wherein exposing the imager device to the plurality of light radiating sources includes illuminating the imager device sequentially with each of the light radiating sources.

28. (Previously Presented) A method to calibrate an imager device, comprising:
- (i) presenting a plurality N of imager devices, where N represents a predetermined number of imager devices;
  - (ii) exposing the first (N=1) imager device to a target to produce a first set of target results;
  - (iii) calculating a first set of calibrating coefficients from the first set of target results;
  - (iv) exposing the first imager device to a plurality of light radiation sources to produce a first set of source results, wherein the first set of calibrating coefficients and the first set of source results form a pair of results;
  - (v) repeating steps (ii) through (iv) N-1 times by employing a different imager device during each repeat of steps (ii) through (iv); and
  - (vi) determining the correlation between the plurality N of imager devices by using each pair results.
29. (Previously Presented) The method of claim 28 wherein exposing the first (N=1) imager device to a target includes presenting a target that represents the spectral sensitivity of the human visual system.
30. (Previously Presented) The method of claim 29 wherein presenting a target that represents the spectral sensitivity of the human visual system includes presenting a Macbeth Colorchecker® color rendition chart.
31. (Previously Presented) The method of claim 28, each light radiation source having a different spectral radiation characteristics, wherein exposing the first imager device to a plurality of light radiation sources includes radiating a series of lights from the plurality of light radiation sources.
32. (Previously Presented) The method of claim 28, wherein exposing the first imager device to a plurality of light radiation sources includes presenting five light emitting diodes having the peak wavelengths of 430nm, 470nm, 545nm, 590nm, and 660nm, respectively.

33. (Previously Presented) The method of claim 28, wherein determining the correlation between the plurality N of imager devices by using each pair results includes employing polynomial regression.
34. (Previously Presented) The method of claim 28, wherein determining the correlation between the plurality N of imager devices by using each pair results includes deriving a unique set of correlation coefficients for each set of calibrating coefficients.
35. (Previously Presented) The method of claim 34, wherein deriving a unique set of correlation coefficients for each set of calibrating coefficients includes employing a statistics analysis program.
36. (Previously Presented) The method of claim 34, further comprising:  
    exposing an imager device to light reflecting off of an object to produce a set of object responses; and  
    applying the correlation coefficients to the set of object responses to produce the image product.
37. (Withdrawn) A method to simulate at least one target color, comprising:  
    presenting means for radiating light;  
    producing a set of responses by exposing one of an imager device and a spectrophotometer to the means for radiating light;  
    presenting a target having at least one target color, the at least one target color having a reflection wavelength;  
    representing the reflection wavelength as a value; and  
    determining at least one weighing factor from the set of responses and the value of the at least one target color.
38. (Withdrawn) The method of claim 37, wherein presenting means for radiating light includes presenting a plurality of light radiating sources.

39. (Withdrawn) The method of claim 38, wherein presenting a plurality of light radiating sources includes presenting three to more than five light emitting diodes, wherein each light emitting diode includes a different spectral radiation characteristic.

40. (Withdrawn) The method of claim 37, wherein presenting three to more than five light emitting diodes includes presenting five light emitting diodes having the peak wavelengths of 430nm, 470nm, 545nm, 590nm, and 660nm, respectively.

41. (Withdrawn) The method of claim 37 wherein presenting a target includes presenting a target that represents the spectral sensitivity of the human visual system.

42. (Withdrawn) The method of claim 41 wherein presenting a target that represents the spectral sensitivity of the human visual system includes presenting a Macbeth Colorchecker® color rendition chart.

43. (Withdrawn) The method of claim 37 wherein producing a set of responses includes determining a radiating set of XYZ tristimulus values for the means for radiating light, wherein presenting a target having at least one target color includes presenting a target having twenty four colors, each color of the target having a reflection wavelength, wherein representing the reflection wavelength as a value includes determining a reflecting set of XYZ tristimulus values for the twenty four colors.